TPBRIDGE(8)

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

SYNOPSIS

tpbridge [*OPTIONS*]

Chapter 2

DESCRIPTION

This is special ATMI server which is used to connect local ATMI instances over the network. The result is network joined instances which makes EnduroX cluster.

Bridge process is used to exchange service lists between two nodes, calculate monotonic clock diff (so that later for messages time can be adjusted) between nodes.

To establish network connection, on one machine it must be in passive mode and on other machine it must be in active mode. Active *tpbridge* periodically tries to connect to the other machine. To one passive bridge only one connection can be made.

If connection is dropped, active node will re-try to connect.

All data messages are prefixed with 4 byte message length indicator. Meaning that the logical message can be split over the multiple packets or within one packed can be carried multiple logical messages - *tpbridge* will solve that.

When connection is estableshed, clock diff and service lists are exchanged, then *bridge* is used to serve ATMI actions over the machines. I.e. *tpcall()*, *tpforward()*, conversations, etc.

When connection is stopped. This is reported to *ndrxd* daemon which removes services from shared memory accordingly.

tpbridge supports two network message formats. First format is native format which sends over the network directly internetal (C lang) structures. This format will work faster, but cannot be used between different type of computers. I.e. in this case it is not possible to mix for example x86_64 with x86. Or x86 with RISC/ARM 32bit. If mixing is necessary, then use EnduroX Network Protocol option, activated by flag *-f* on both nodes. In this case standard common TLV data format is used for data exchange between nodes. This might be slower than native format.

tpbridge supports traffic encryption & signing by GNU PGP keys. In this case for Enduro/X user keys must be setup and exchanged with receipient. Bridge process needs to know sender (for signing) and recipient (for encryption) references.

Chapter 3

OPTIONS

-n *NODE_ID*
Other EnduroX instance's Node ID. Numerical 1..32.

[-r]
Send Refresh messages to other node. If not set, other node will not see our's node's services. OPTIONAL flag.

-t *MODE*
MODE can be *P* for passive/TCPIP server mode, any other (e.g. *A*) will be client mode.

-i *IP_ADDRESS*
In Active mode it is IP address to connect to. In passive mode it is binding/listen address.

-p *PORT_NUMBER*
In active mode *PORT_NUMBER* is port to connect to. In passive mode it is port on which to listen for connection.

-T *TIME_OUT_SEC*
Parameter indicates time-out value for packet receive in seconds. This is socket option. Receive is initiate when it either there is poll even on socket or incomplete logical message is received and then next *recv()* is called. If the message part is not received in time, then socket is closed and connection is restarted.

[-b *BACKLOG_NR*]
Number of backlog entries. This is server's (passive mode) connection queue, before server accepts connection. OPTIONAL parameter. Default value is 100. But could be set to something like 5.

[-c *CONNECTION_CHECK_SEC*]
Connection check interval in seconds. OPTIONAL parameter. Default value 5.

[-z *PERIODIC_ZERO_SEND_SEC*]
Interval in seconds between which zero length message is wrote to socket. This is useful to keep the connection option over the firewalls, etc. OPTIONAL parameter. Default value 0 (Do not send).

[-f]
Use *EnduroX Standard Network TLV Protocol* instead of native data structures for sending data over the network. This also ensure some backwards compatiblity between EnduroX versions. But cases for backwards compatility must be checked individually.

[-g *PGP_RECIPIENT*]
This is recipients reference code for GNU PGP message encryption.

[-s *PGP_SIGNER*]
Signer reference for GNU PGP scheme. Signer works if *-g* is enabled. *-s* is optional.

[-P *THREAD_POOL_SIZE*]
This is number of worker threads for sending and receiving messages for/to network. The default size is 5.

Chapter 4

EXIT STATUS

0
Success

1
Failure

Chapter 5

BUGS

Report bugs to support@mavimax.com

Chapter 6

SEE ALSO

xadmin(8)

Chapter 7

COPYING